Appendix C

Review of Design and Construction Drawings

Drawing styles vary among engineering offices, but the conventions used are very consistent. The following are some of the common designations:

1. Around the perimeter of the building, the exterior walls will be shown as a double line, if the space between the lines is empty, this will usually be a wood stud wall. 
2. Concrete walls will be shaded. 
3. Masonry walls will be cross hatched. 
4. Horizontal beams and girders will be shown with a solid line for steel and wood, and a double solid or dotted line for concrete.
   - Steel framing will have a notation of shape, depth, and weight of the member. The designations will include W, S, I, B and several others followed by the depth in inches, an "x," and the weight in pounds per lineal foot. An example would be W8x10 (wide flange shape, 8" deep, 10 lbs/ft).
   - Wood framing will have the width and depth of the member. An example would be 4x10 (4" wide and 10" deep). Floor joists and roof rafters will be shown with the same call-out except not all members will be shown. A few at each end of the area being framed will show and there will be an arrow showing the extent and the call-out of the size members.
   - Concrete framing will have the width and depth. Where steel and wood are shown as single line, concrete will be shown as a double line. An example of the call out would be 12x24 (12" wide and 24" deep). Additionally, or in lieu of the number call-out, the member might be given a letter and number (B-1 or G-1) with a reference to a schedule for the size and reinforcing. "B" stands for beam and "G" stands for girder. Usually, beams are smaller than girders and span between girders while girders will be larger and frame between columns.
5. Columns will show on the floor plans as their shape with a shading designation where appropriate:
   - Steel column will be shown as an "H" rotated to the correct orientation for the location on the plan.
   - Wood column will be an open square.
   - Concrete column will be either a square or a circle depending on the column configuration. The square or circle will be shaded. 
6. Steel moment frames will show the columns with a heavy line between the columns representing the beam or girder. At each end of the beam or girder at the column will be a small triangle shaded. This indicates that the connection between the beam or girder and the column is fully restrained.